

WHAT IS CLAIMED IS:

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1. A smart browser module comprising:  
an application layer interface coupled to a protocol stack, said application layer interface operative to receive at least one data packet comprising at least a portion of a target web page;  
a user interface for interacting with a user;  
a multilevel search control interface; Adam's  
a multilevel object factory coupled to receive a first input relating to said target web page and a second input from said multilevel search control interface, said multilevel object factory operative to specify a remote object agent that orchestrates a multilevel browser operation based upon said first and second inputs, whereby said remote object agent is exported from said web browser to execute on a network server external from said smart browser. 25/45-26/62
2. The browser of Claim 1, wherein said user interface comprises a window display providing an interactive menu to a user. in line 2, included
3. The browser of Claim 2, wherein said user window is a part of a windows based graphical user interface.
4. The browser of Claim 1, where said user interface comprises a voice interface. obvious
5. The browser of Claim 1, wherein said multilevel browser operation corresponds to a multilevel "find in page" operation. parse 25/60-65
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6. A multilevel-search browser plug-in module for coupling to a host browser, whereby the host browser comprises a markup language parser, and a user interface for coupling to a user, and an application layer communications interface, said application layer interface operative to receive at least one data packet comprising at least a portion of a target web page the plug-in module comprising:

a multilevel search control interface;

a multilevel object factory coupled to receive a first input relating to said target web page and a second input from said multilevel search control interface, said multilevel object factory operative to specify a remote object agent that orchestrates a multilevel browser operation based upon said first and second inputs, whereby said remote object agent is exported from said web browser to execute on a network server external from said smart browser.

7. The plug-in module of Claim 6, wherein said plug-in module is embodied as Java™ code. *obvious*

8. The plug-in module of Claim 6, wherein said plug-in module is embodied as executable XML code.

9. For use in a client browser, a method comprising the steps of:  
obtaining application data from an application layer interface;  
passing said information to a user via a user interface;  
coupling a multilevel-search interface signal to a user;  
accepting a parameter set via said multilevel-search interface, said parameter set comprising least one parameter defining a multilevel browser operation;  
generating a remote agent object for execution on a remote network server,  
whereby said remote agent object orchestrates the following acts:

(i) accessing a first markup language document and scanning said document to determine a hyperlink contained therein;

(ii) activating said hyperlink found in said step of accessing;

(iii) retrieving at least a portion of a second markup document associated with said hyperlink; and

(iv) comparing the contents of said at least a portion of said second markup document to at least a portion of said set parameter set.

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1 10. The method of Claim 9, whereby said remote agent object further  
2 orchestrates the following act:

3 comparing the contents of at least a portion of said first markup document to at  
4 least a portion of said set parameter set.

1 11. The method of Claim 9, wherein said parameter set includes a character  
2 string and an indication of the number of levels to search.

1 12. The method of Claim 9, wherein said parameter set includes a Boolean  
2 keyword expression and an indication of the number of levels to search.

1 13. The method of Claim 9, wherein said client browser is hosted within a  
2 wireless mobile device and said parameter set includes information derived from an  
3 electronic positioning system.

1 14. The method of Claim 9, whereby said remote agent object further  
2 orchestrates the following act:

3 evaluating the results of the comparison and when said step of comparing reveals  
4 a match, coupling information related thereto to the user, and when said step of  
5 comparing does not yield a match, checking to see if the search is complete, and if it is  
6 not, accessing a next hyperlink and repeating the steps of activating, retrieving, and  
7 comparing, and evaluating.

1 15. The method of Claim 9, wherein said step of evaluating further comprises  
2 the steps of:

3 when said information has been coupled to said user, awaiting a find-next signal,  
4 and when said find-next signal is received, checking to see if the search is complete, and  
5 if it is not, accessing a next hyperlink and repeating the steps of activating, retrieving, and  
6 comparing, and evaluating.

1 16. The method of Claim 9, wherein said parameter set includes a boolean  
2 keyword expression, an indication of the number of levels to search, and an indication to  
3 continue the search on a designated-next-linked page.

1 17. The method of Claim 9, wherein said hyperlink points to a metadata  
2 description of a web resource and said step of accessing involves accessing a file  
3 containing metadata relating to said resource.

1 18. The method of Claim 9, wherein said second markup document comprises  
2 a metadata description, said metadata description being described using a resource  
3 description framework (RDF) based language.

1 19. In an intelligent client, a method of seeking information in an information  
2 network, the method comprising the steps of:

3 accessing a web page via said network connection using a client-server  
4 transaction;

5 presenting said web page to a user;

6 receiving a set of one or more multilevel search parameters to define a multilevel  
7 browsing operation over a graph of hyperlinks reachable from said web page in N hops,  
8 where N is a positive integer;

9 specifying in said intelligent client a remote agent object, said remote agent object  
10 operative to orchestrate the implementation of said multilevel browsing operation from a  
11 remote network node;

12 dispatching said remote agent object to a remote server for execution;

13 whereby said remote agent object causes said multilevel browser function to be  
14 performed at least partially in said remote server.

1 20. The method of Claim 19, wherein remote agent object is represented as  
2 Java bytecodes, executes at least partially in an agent sandbox, and uses a remote method  
3 invocation based distributed object protocol to communicate with said intelligent client.